

Russell ATC Electrical Technology Instructor Doug Keaton and E-3 Team of Students Recognized During Environmental Quality Commission 2007 Earth Day Awards Ceremony



Keaton and his students received one of eight special awards presented by the Environmental Quality Commission during a special ceremony held at McConnell Springs Park in Lexington, KY on Friday, April 20. Photo (L to R): OCTE Deputy Executive Director Lewis Carter, Environmental and Public Protection Cabinet Secretary Teresa J. Hill, Krista Miller, electrical technology student; Heather Kinley, electrical technology student; Mr. Doug Keaton, Russell ATC electrical technology instructor; Shaun Stephens, electrical technology student; Karen Reagor, Kentucky NEED Project coordinator; Pam Proctor, Kentucky NEED Project assistant; and Environmental and Public Protection Cabinet Deputy Secretary Lloyd Cress. Secretary Hill and Deputy Secretary Cress take a moment to congratulate Mr. Keaton and his students for their "innovative efforts in energy efficiency public awareness."

Russell Co. ATC Electrical Technology Instructor Doug Keaton and three of his students were honored with an “Earth Day Award,” presented by the Environmental Quality Commission (EQC) during a special ceremony on Friday, April 20 at McConnell Springs Park in Lexington.

As part of the ceremony, recipients had an opportunity to meet Environmental and Public Protection Cabinet Secretary Teresa J. Hill and Deputy Secretary Lloyd Cress. During her keynote address, Secretary Hill relayed that it was an ethical responsibility to protect and preserve the resources of the Commonwealth. Keaton couldn’t agree more and is working to increase energy knowledge, awareness and conservation among his students through an innovative project.

Keaton and his E-3 Team (Efficient Electrical Energy) were nominated for



Keaton and students recognized



the award by Karen Reagor who serves as coordinator of “*The NEED Project*.”

According to its website, the mission of the NEED (National Energy Education Development) Project is to promote an energy conscious and educated society by creating effective networks of students, educators, business, government and community leaders to design and deliver objective, multi-sided energy education programs.

Over the past year, Reagor has worked with Keaton to promote energy conservation. In addition to building a live action

display for his classroom, Keaton’s students built “NEED” the same display so that Reagor could use it in presentations throughout the state.

Of her nomination, Reagor has this to say, “Mr. Keaton is one of those teachers who can and does think ‘out of the box.’ His ability to connect content to real life applications is to be commended. His support of *The Kentucky NEED Project* has helped us in our statewide promotion of ENERGYSTAR’s Change a Light, Change the World Campaign. His students built a display with two residential metering devices so participants can compare the energy usage of incandescent and compact fluorescent bulbs. This display will be used across the Commonwealth to educate students and their families about energy conservation.”

“Both displays we made had two residential meters on a board. There were three 100 watt incandescent (INCAN) bulbs wired to one meter and three 100 watt compact fluorescent lights (CFL) bulbs wired to the second meter. We assembled controls to turn the display on and off. I wanted my students to understand energy conservation and this seemed to be a great way to introduce the concept. At the same time, we made money comparisons regarding the types of bulbs used and energy consumption. So, we were able to teach cost savings and mathematical formulas at the same time,” says Keaton. “It is an awesome and inspiring experience for me and my students to be recognized with this award – especially since there were only eight presented. I’m proud of what we have accomplished and that my students had an opportunity to be recognized for their outstanding efforts. It’s something they will always remember because they were part of a campaign to promote energy conservation.”

How did all of this come about? Keaton began looking at the subject of renewable energy technology as a result of becoming involved in a Tech Prep project with Russell High School Physics Instructor Joe Aldrich. The initial project was to study alternative and/or renewable energy solutions with a focus on wind energy. Funds from the grant were used to purchase items to build a 1 kw wind turbine generator and an energy conservation display.

Keaton, who has an intense affection for teaching students and relishes a worthy challenge, dived into the project. He had an opportunity to meet Reagor and learned about NEED’s “Science of Energy” curriculum. The

curriculum begins with science and incorporates science into all of its materials. Because the curriculum had been developed by educators, Keaton decided to include some of the content into his program. Equally important, students became facilitators by teaching others; they acquired confidence and even developed effective leadership skills, as well as knowledge.



Photo above: OCTE Deputy Executive Director Lewis D. Carter congratulates Doug Keaton for his outstanding contributions in winning this award.

“It’s obvious that Mr. Keaton has put a lot of time and effort into this entire project and he is an outstanding ambassador for the KY Tech School System. I was very impressed with his students and the level of knowledge they have regarding the importance of energy conservation,” says OCTE Deputy Executive Director Lewis D. Carter. “The state government theme for Earth Day this year is ‘Energy for Kentucky’s Unbridled Future,’ and we are privileged to have an instructor in the system who is unbridled in our pursuit of providing new career pathways for our students. Mr. Keaton has done a great job of teaching students, working with the local school district and Kentucky NEED Project, and making it relevant in today’s world.”

Since part of the Tech Prep grant involved building a 1 kw wind turbine generator, Keaton decided to present his students with a challenge. He provided them with some materials and assigned each of them the task of building a windmill. Several outstanding designs were created, but the most important element of the lesson plan was that “students had to think about what they were building, using only the materials that I gave to them. They had to effectively incorporate physics principles so that the windmills would actually work. My students rose to the challenge and I’m proud of what they accomplished.”

Additionally, the Tech Prep grant involved building an energy conservation display, so, he and his students incorporated EnergyStar’s Change a Light - Change the World campaign into the project. They built the live action display to show energy consumption differences between CFL and INCAN bulbs. Not only did the display provide a visible means of showing which bulb used more energy, students could also hypothesize, measure, and record data. This project was a hit with the students for a number of reasons and because of the science academic core content, more teachers within the district became interested in what Keaton and his students were doing.



Photo on L: Keaton explains renewable wind energy and displays windmills that students built in his class.
Photo on R: Electrical technology student Heather Kinley discusses energy consumption differences between CFL and INCAN bulbs to students at Russell Middle during Science Fair.



After they showcased at the Science Fair, they took their exhibit to the local Wal-Mart where students were able to meet with members of the general public to promote the Change a Light - Change the World campaign. They solicited and got 685 people to sign Energy Star Pledges and showed them the difference between using CFL and INCAN lights. Once again, the students were well received.

As a teacher who is always looking for ways to inspire students to achieve, Keaton has experimented with all types of teaching and learning strategies. His students love who he is and what he does to motivate them to learn – and, they can't wait to get to his class every day. They will also tell you that he is interesting, fun and requires each of them to “think.” Admiration for “Mr. K” is apparent when talking with any of his students.

Students in Doug Keaton's Electrical Technology Program set up at Wal-Mart to promote the “Change a Light/Change the World Campaign. They showcased the “live action display” to provide citizens with an opportunity to observe the differences in using CFL vs INCAN light bulbs.



It's no secret that energy costs are second only to personnel costs in school districts. And, Keaton and his students want to install the wind turbine generator that they have built as part of an energy conservation plan to lower costs by 25 per cent at the Russell ATC over this next year.

Keaton believed in relevance before it became one of the three "R's" (Rigor, Relevance and Relationships). He has always thought it was important to incorporate high standards into his classroom and to make learning relevant through what many now call a rigorous curriculum. Keaton provides his students with engaging and challenging assignments that are rigorous in core content; however, to him rigorous is also a personal approach to teaching because it's important to him that his students enjoy learning while being challenged.



EQC Commissioner Dr. Andy Ernest (who is also the associate dean of the College of Science and Engineering at Western Kentucky University) takes a moment to talk with Doug Keaton and inquire about the types of skills he is teaching in his classroom. OCTE Deputy Executive Director Lewis D. Carter listens as Keaton explains.

At right:
Keaton
takes a
moment to
congratulate
his students
and does
the
“High 5.”



Above: Hill and
Keaton discuss
the “Windmill”
project.

At left: EPPC
Deputy
Secretary Lloyd
Cress
addresses
audience during
ceremony.

Above:: Secretary Hill enjoys discussing
educational options with Shaun Stephens.



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